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EXAMINER

ISAAC, STANETTA D

ART UNIT PAPER NUMBER

2812

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,961

Applicant(s)

YAMAZAKI ET AL.

Examiner

Stanetta D. Isaac

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Makita et al. US Patent 5,696,003.
3. Makita discloses a semiconductor method substantially as claimed. See **Figs. 1-29** where Makita teaches a method of manufacturing a semiconductor device comprising, the steps of:
- adding a metal element **305** to a semiconductor film having an amorphous structure;
- crystallizing the semiconductor film **307, 308** by a first heat treatment to form crystalline, semiconductor film;
- forming an impurity region to which a noble gas element is added in the crystalline semiconductor film; and
- segregating the metal element in the impurity region by a second heat treatment.
4. Pertaining to claim 2, Makita teaches a method of manufacturing a semiconductor device according to claim 1, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source, selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.
5. Pertaining to claim 3, Makita teaches a method of manufacturing a semiconductor device according to claim 1, wherein the second heat treatment is performed by a rapid thermal anneal

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method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

6. Pertaining to claim 4, Matika teaches a method of manufacturing a semiconductor device according to claim 1, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

7. Pertaining to claim 5, Matika teaches a method of manufacturing a semiconductor device according to claim 1, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

8. Pertaining to claim 6, Matika teaches a method of manufacturing a semiconductor device comprising the steps of:

adding a metal element to a semiconductor film having an amorphous structure;

crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

irradiating the crystalline semiconductor film with laser light to improve crystalline forming an impurity region to which a noble gas element is added in the crystalline semiconductor film; and

segregating the metal element in the impurity region by a second heat treatment.

9. Pertaining to claim 7, Makita teaches a method of manufacturing a semiconductor device according to claim 6, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

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10. Pertaining to claim 8, Makita teaches a method of manufacturing a semiconductor device according to claim 6, wherein the laser light is emitted using one selected from the group consisting of tin excimer laser, a YAG laser, a YVO₄ laser, or a YLF laser.

11. Pertaining to claim 9, Makita teaches a method of manufacturing a semiconductor device according to claim 6, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

12. Pertaining to claim 10, Makita teaches a method of manufacturing a semiconductor device according to claim 6, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

13. Pertaining to claim 11, Makita teaches a method of manufacturing a semiconductor device according to claim 6, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

14. Pertaining to claim 12, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

- adding a metal element to a semiconductor film having an amorphous structure;
- crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;
- forming an impurity region to which a noble gas element is added in the crystalline semiconductor film; and
- segregating the metal element in the impurity region by a second heat treatment; and
- removing the impurity by etching

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15. Pertaining to claim 13, Makita teaches a method of manufacturing a semiconductor device according to claim 12, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

16. Pertaining to claim 14, Makita teaches a method of manufacturing a semiconductor device according to claim 12, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

17. Pertaining to claim 15, Makita teaches a method of manufacturing a semiconductor device according to claim 12, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

18. Pertaining to claim 16, Makita teaches a method of manufacturing a semiconductor device according to claim 12, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

19. Pertaining to claim 17, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

- adding a metal element to a semiconductor film having an amorphous structure;
- crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;
- irradiating the crystalline semiconductor film with laser light to improve crystallinity;
- forming an impurity region to which a noble gas element is added in the crystalline semiconductor film; and

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segregating the metal element in the impurity region by a second heat treatment; and removing the impurity region by etching.

20. Pertaining to claim 18, Makita teaches a method of manufacturing a semiconductor device according to claim 17, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

21. Pertaining to claim 19, Makita teaches a method of manufacturing a semiconductor device according to claim 17, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YVO₄ laser, or a YLF laser.

22. Pertaining to claim 20, Makita teaches a method of manufacturing a semiconductor device according, to claim 17, wherein the second heat treatment is performed by a rapid thermal anneal method using, one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

23. Pertaining to claim 21, Makita teaches a method of manufacturing, a semiconductor device according to claim 17, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

24. Pertaining to claim 22, Makita teaches a method of manufacturing a semiconductor device according to claim 17, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

25. Pertaining to claim 23, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

adding a metal element to a semiconductor film having an amorphous structure

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crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

forming a mask insulating film **304** having an opening on the crystalline semiconductor film;

forming an impurity region to which an ion of a noble gas element accelerated by an electric field is added through the opening in the crystalline semiconductor film; and

segregating the metal element in the impurity region by a second heat treatment.

26. Pertaining to claim 24 Makita teaches a method of manufacturing a semiconductor device according to claim 23, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

27. Pertaining to claim 25, Makita teaches a method of manufacturing a semiconductor device according to claim 23, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

28. Pertaining to claim 26, Makita teaches a method of manufacturing a semiconductor device according to claim 23, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, O, Ir, Pt, Cu, and Au.

29. Pertaining to claim 27, Makita teaches a method of manufacturing a semiconductor device according to claim 23, wherein the noble gas element is at least one selected from the group consisting of helium, neon, krypton, and xenon.

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30. Pertaining to claim 28, Makita teaches a method of manufacturing a semiconductor device comprising the steps of;

adding a metal element to a semiconductor film having an amorphous structure;

crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

irradiating the crystalline semiconductor film with laser light to improve crystalline;

forming a mask insulating film having an opening on the crystalline semiconductor film;

forming an impurity region to which an ion of a noble gas element accelerated by an electric field is added through the opening in the crystalline semiconductor film; and

segregating the metal element in the impurity region by a second heat treatment.

31. Pertaining to claim 29, Makita teaches a method of manufacturing a semiconductor device according to claim 28. wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

32. Pertaining to claim 30, Makita teaches a method of manufacturing a semiconductor device according to claim 28, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YVO₄ laser, or a YLF laser.

33. Pertaining to claim 31, Makita teaches a method of manufacturing a semiconductor device according to claim 28 wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

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34. Pertaining to claim 32, Makita teaches a method of manufacturing a semiconductor device according to claim 28, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

35. Pertaining to claim 33, Makita teaches a method of manufacturing a semiconductor device according to claim 28, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

36. Pertaining to claim 34, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

adding a metal element to a semiconductor film having an amorphous structure;

crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

forming a mask insulating film having an opening on the crystalline semiconductor film;

forming an impurity region to which an ion of a noble gas element accelerated by an electric field is added through the opening in the crystalline semiconductor film;

segregating the metal element in the impurity region by a second heat treatment; and

removing the impurity region by etching.

37. Pertaining to claim 35, Makita teaches a method of manufacturing a semiconductor device according to claim 34, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

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38. Pertaining to claim 36, Makita teaches a method of manufacturing a semiconductor device according to claim 34, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YVO₄ laser, or a YLF laser.

39. Pertaining to claim 37, Makita teaches a method of manufacturing a semiconductor device according to claim 34, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

40. Pertaining to claim 38, Makita teaches a method of manufacturing a semiconductor device according to claim 34, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

41. Pertaining to claim 39, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

adding a metal element to a semiconductor film having an amorphous structure;

crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

irradiating the crystalline semiconductor film with laser light to improve crystallinity;

forming a mask insulating film having an opening on the crystalline semiconductor film;

forming an impurity region to which an ion of a noble gas element accelerated by an electric field is added, through the opening in the crystalline semiconductor film;

segregating the metal element in the impurity region by a second heat treatment and removing the impurity region by etching.

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42. Pertaining to claim 40, Makita teaches a method of manufacturing a semiconductor device according to claim 39, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

43. Pertaining to claim 41, Makita teaches a method of manufacturing a semiconductor device according to claim 39, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YVO₄ laser, or a YLF laser.

44. Pertaining to claim 42, Makita teaches a method of manufacturing a semiconductor device according to claim 39, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

45. Pertaining to claim 43, Makita teaches a method of manufacturing a semiconductor device according to claim 39, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Co, Ir, Pt, Cu, and Au.

46. Pertaining to claim 44, Makita teaches a method of manufacturing a semiconductor device according to claim 39, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

47. Pertaining to claim 45, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

- adding a metal element to a semiconductor film having an amorphous structure;
- crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

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forming an island-like divided semiconductor region by etching the crystalline semiconductor film;

forming a gate insulating film and a gate electrode corresponding to the semiconductor region;

forming in the semiconductor region an impurity region to which a one conductivity type impurity element and a noble gas element are added; and

segregating the metal element in the impurity region by a second heat treatment.

48. Pertaining to claim 46, Makita teaches a method of manufacturing a semiconductor device according to claim 45, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

49. Pertaining to claim 47, Makita teaches a method of manufacturing a semiconductor device according to claim 45, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YV0₄ laser, or a YLF laser.

50. Pertaining to claim 48, Makita teaches a method of manufacturing a semiconductor device according to claim 45, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

51. Pertaining to claim 49, Makita teaches a method of manufacturing a semiconductor device according to claim 45, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

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52. Pertaining to claim 50, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

adding a metal element to a semiconductor film having an amorphous structure
crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

irradiating the crystalline semiconductor film with laser light to improve crystallinity;

forming an island-like divided semiconductor region by etching the crystalline semiconductor film;

forming a gate insulating film **206** and a gate electrode **207** corresponding to the semiconductor region;

forming in the semiconductor region an impurity region to which a one conductivity type impurity element and a noble gas element are added; and

segregating the metal element in the impurity region by a second heat treatment.

53. Pertaining to claim 51, Makita teaches a method of manufacturing a semiconductor device according to claim 50, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

54. Pertaining to claim 52, Makita teaches a method of manufacturing a semiconductor device according to claim 50, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, YAG laser, a YVO₄ laser, or a YLF laser.

55. Pertaining to claim 53, Makita teaches a method of manufacturing a semiconductor device according to claim 50, wherein the second heat treatment is performed by a rapid thermal

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anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp xenon arc lamp, and a carbon arc lamp.

56. Pertaining to claim 54, Makita teaches a method of manufacturing a semiconductor device according to claim 50, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

57. Pertaining to claim 55, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

adding a metal element to a semiconductor film having an amorphous structure;

crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;

forming an island-like **309** divided semiconductor region by etching the crystalline semiconductor film;

forming a gate insulating film and a gate electrode corresponding to the semiconductor region;

forming in the semiconductor region a first impurity region to which a one conductivity type impurity element is added and a second impurity region to which a one conductivity the impurity element and a noble gas element are added; and

segregating the metal element in the second impurity region by a second heat treatment.

58. Pertaining to claim 56, Makita teaches a method of manufacturing a semiconductor device according to claim 55, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

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59. Pertaining to claim 57, Makita teaches a method of manufacturing a semiconductor device according to claim 55, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YV0₄ laser, or a YLF laser.

60. Pertaining to claim 58, Makita teaches a method of manufacturing a semiconductor device according to claim 55, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

61. Pertaining to claim 59, Makita teaches a method of manufacturing a semiconductor device according to claim 55, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

62. Pertaining to claim 60, Makita teaches a method of manufacturing a semiconductor device comprising the steps of:

- adding a metal element to a semiconductor film having an amorphous structure;
- crystallizing the semiconductor film by a first heat treatment to form a crystalline semiconductor film;
- irradiating the crystalline semiconductor film with laser light to improve crystallinity;
- forming an island-like divided semiconductor region by etching the crystalline semiconductor film;
- forming a gate insulating film and a gate electrode corresponding to the semiconductor region;

forming in the semiconductor region a first impurity region to which a one conductivity type impurity element is added and a second impurity region to which a one conductivity type impurity element and a noble gas element are added; and
segregating the metal element in the second impurity region by a second heat treatment.

63. Pertaining to claim 61, Makita teaches a method of manufacturing a semiconductor device according to claim 60, wherein the first heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

64. Pertaining to claim 62, Makita teaches a method of manufacturing a semiconductor device according to claim 60, wherein the laser light is emitted using one selected from the group consisting of an excimer laser, a YAG laser, a YVO₄ laser, or a YLF laser.

65. Pertaining to claim 63, Makita teaches a method of manufacturing a semiconductor device according to claim 60, wherein the second heat treatment is performed by a rapid thermal anneal method using one heat source selected from the group consisting of a halogen lamp, a metal halide lamp, a xenon arc lamp, and a carbon arc lamp.

66. Pertaining to claim 64, Makita teaches a method of manufacturing a semiconductor device according to claim 60, wherein the metal element is at least one selected from the group consisting of Fe, Ni, Co, Ru, Rh, Pd, Os, Ir, Pt, Cu, and Au.

67. Pertaining to claim 65, Makita teaches a method of manufacturing a semiconductor device according to claim 60, wherein the noble gas element is at least one selected from the group consisting of helium, neon, argon, krypton, and xenon.

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Conclusion

68. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanetta D. Isaac whose telephone number is 703-308-5871. The examiner can normally be reached on Monday-Friday 7:30am -5:30pm.

69. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Nebling can be reached on 703-308-3325. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-3432 for After Final communications.

70. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Stanetta Isaac
Patent Examiner
June 15, 2003


John F. Niebling
Supervisory Patent Examiner
Technology Center 2800